

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A ~~motormagnetic structure~~ comprising:

a first magnetic ~~bodies~~ body; and

a second magnetic ~~body~~ body; and

a third magnetic body disposed ~~therebetween and~~ between said first and second magnetic bodies, the third magnetic body being relatively movable in a prescribed direction in relation to said first and second magnetic bodies,

wherein said first magnetic body and second magnetic body respectively comprise a structure in which a plurality of electromagnetic coils capable of being alternately excited to opposite polarities is disposed in order; said third magnetic body comprises a structure in which permanent magnets alternately magnetized to opposite polarities are disposed in order; and said first magnetic body and said second magnetic body are structured such that an electromagnetic coil of said first magnetic body and an electromagnetic coil of said second magnetic body are disposed so as to mutually ~~posses~~ possess an array pitch difference,

said magnetic structure further comprising a coil exciting circuit for supplying an exciting current, ~~consisting of~~ including frequency signals having different phases, ~~to to~~ the electromagnetic coils of said first and second magnetic bodies,

wherein the pair formed from said first and second magnetic bodies and one side of said third magnetic body form a rotor, and the pair formed from said first and second magnetic bodies and the other side of said third magnetic body form a stator, and

wherein an equal number of magnet poles of the rotor and poles of the electromagnetic coil for the phase are formed, a rotation speed detector that detects the rotation speed of the rotor being set in a direction perpendicular to an axis of the rotor, and

wherein said coil exciting circuit controls excitation of the electromagnetic coils of said first and second magnetic body via the exciting current supplied to the electromagnetic coils, the phase of the current being corrected based on a rotational speed of said rotor.

2-5. (Cancelled)

5. (Currently Amended) A motormagnetic~~structure~~ according to claim 1, wherein said first magnetic body, second magnetic body and third magnetic body are respectively formed in a circular arc.

6. (Currently Amended) A motormagnetic~~structure~~ according to claim 1, wherein said first magnetic body, second magnetic body and third magnetic body are respectively formed in a straight line.

7. (Currently Amended) A ~~motormagnetic structure~~ according to claim 5, wherein said first magnetic body and second magnetic body are disposed at an equidistance, and said third magnetic body is disposed between said first magnetic body and second magnetic body.

8-9. (Cancelled)

10. (Currently Amended) A motor according to ~~claim 1~~claim 9, wherein said coil exciting circuit ~~means~~ comprises a reference pulse signal ~~generator~~generation means; and a phase correction ~~means for correcting~~corrector that corrects the phase of the exciting current to be supplied to the electromagnetic coil of said first magnetic body and the electromagnetic coil of said second magnetic body based on said rotational speed detection signal and said reference pulse signal.

11. (Currently Amended) A motor according to claim 10, wherein said coil exciting circuit ~~means~~ comprises a buffer ~~means for controlling the~~that controls an exciting direction of said electromagnetic coil at a prescribed duty ratio upon the phase-corrected exciting current being supplied thereto.

12. (Cancelled)

13. (Currently Amended) A motor comprising the magnetic structure according to claim 7, wherein the pair formed from said first and second magnetic bodies and one side of said third magnetic body form a slider, and the pair formed from said first and second magnetic bodies and the other side of said third magnetic body form a stator.

14. (Withdrawn) A motor according to claim 1, wherein a gear is formed on said rotor.

15. (Previously Presented) A motor according to claim 1, wherein said rotor is connected to a rotating body, and functions as a power generator.

16. (Previously Presented) A motor according to claim 1, wherein a plurality of pairs formed from said stator and rotor is connected serially or in parallel.

17. (Previously Presented) A driver comprising the motor according to claim 1 as a drive source.

18. (Withdrawn) A motor comprising a stator and a rotor, wherein a gear is formed on said rotor or stator.

19-23. (Cancelled)

23. (Currently Amended) A ~~motormagnetic structure~~ according to claim 1 , wherein ~~aid~~ said coil exciting circuit comprises a start-up control unit for generating a reference wave pulse and forming an exciting signal to be supplied to said magnetic body from said reference wave pulse in order to start-up said first and/or second magnetic body; and a sensor follow-up control unit for forming an exciting signal to be supplied to said magnetic body by following the output from the rotational position sensor of said magnetic body after the start-up of said magnetic body.

24-25. (Cancelled)

26. (Currently Amended) A ~~motormagnetic structure~~ according to claims 1, wherein every exciting coil is constantly excited during the start-up rotation (2π) in relation to the two-phase exciting coil.

27. (Currently Amended) A ~~motormagnetic structure~~ according to claim 1, wherein the duty ratio of the signal to be supplied from said coil exciting circuit ~~means to~~ the electromagnetic coil of said first and/or second magnetic body is made to change.

28. (Currently Amended) A ~~motormagnetic structure~~ according to claim 27, wherein said duty ratio is determined in accordance with the driving state of the load driven with said magnetic structure.

29-30. (Cancelled)

31. (Currently Amended) A ~~motormagnetic structure~~ according to claim 1, wherein said first and second magnetic structures are structured from an electromagnetic coil formed in a coil shape by winding a conducting sleeve around a nonmagnetic bobbin.

32. (Currently Amended) A ~~motormagnetic structure~~ according to claim 31, wherein a magnetic body is driven via switching of attraction and repulsion between third magnetic bodies formed from said electromagnetic coil and a permanent magnet.

33. (Currently Amended) A ~~motormagnetic structure~~ according to claim 31, wherein said first and second magnetic bodies are structured from a magnetic stator formed from a nonmagnetic bobbin.

34 -39. (Cancelled)